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ABSTRACT

Western United States (characterized by low population density with small, scattered urban centers) underwent tremendous economic and population growth in the 1970's. The impact on small towns and rural areas included ecological damage and fewer permanent jobs than had been anticipated available to local persons. In spite of area growth, most rural youth (predominantly white, with significant Hispanic and American Indian segments) continue to migrate to larger population centers to get good jobs or training for future careers in their home community. Many small rural high schools cannot offer vocational education options other than agriculture and homemaking because of insufficient students to qualify for teachers and equipment, problems with state funding mechanisms, and excessive time and paperwork required to obtain small amounts of federal funds. American Indian and Hispanic youth have special problems (language and cultural differences, lack of role models, high family poverty rates) which affect work patterns. Challenges for rural vocational education are to reconcile alternative cultural patterns with regular working patterns, and to equip individuals with broad-based skills so they can remain and contribute to their community's economic development; a possible solution is the community development corporation concept, using the rural school as its center. (MH)

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RURAL VOCATIONAL EDUCATION AND ECONOMIC DEVELOPMENT IN THE WESTERN STATES

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The purposes of this paper are to present a summary of the economic and demographic conditions and trends which affect vocational education in the western United States and to discuss the impact of these factors on the delivery of vocational education in rural areas of the West. The "West" has been defined very broadly, to include the Rocky Mountain and Pacific Coast states, with some additional references to Texas and Oklahoma. Studies which define the West to include North and South Dakota have been used as references, as has an article which defines the West to exclude the coastal sections of California, Oregon and Washington, but to include Minnesota. The paper is intended to provide an overview, rather than a thorough documentation of conditions and responses. The ways in which the West, however defined, is different, and the implications of these differences for vocational education in rural areas, is the focus of the paper.

Population Characteristics and Residential Patterns

Parts of Texas and California, and much of the remaining western states, are characterized by broad expanses of sparsely populated areas dotted with smaller urban centers. Low population density is the major demographic feature of the West. For example, seventeen of New Mexico's 32 counties have a population density of less than ten persons per square mile. Average density in the state is 9.4 persons per square mile. Based on a definition of the West used in a Conference Board article (excluding the strip of Pacific Coastal settlements, but including Minnesota, western Nebraska and most of Texas) the region had only nine major metropolitan areas and 43 minor metropolitan areas in 1974. "In general," the description read, "these metropolitan areas are set at considerable distances from one another and are surrounded by large tracts of thinly-settled land."

In 1970, however, rural areas and small towns in the area accounted for 46 percent of the population, compared to 30 percent nationwide.[1]

The population of the western states is predominantly white, with significant Hispanic and American Indian segments (Table 1). Outside of the major Texas and California cities, there are few blacks; and even the growing Hispanic population has tended to concentrate in urban areas. A significant percentage of Hispanics do live in nonmetropolitan areas in some states, notably Arizona (where 26.8 percent of all Hispanics live in rural areas), New Mexico (68.7 percent), Colorado (25.5 percent) and parts of Texas (30.1 percent statewide, concentrated in south Texas). The Indian population is concentrated in certain areas also, and accounts for most of the minority population in parts of the West. A study of the Northern Great Plains coal regions reveals that as of 1970, the population of that part of the West was about 95 percent white, and less than one percent black. Of the five percent of the population who were minorities, almost 90 percent were American Indian.[2] Most reservations are rural areas, and many Indians live in virtual isolation on the reservations.

Population Growth

Not since the great western migrations of the last half of the 1800's has so much attention been brought to bear on the westward shift of the population. In the decade of the 1970's, population growth in the western and southern states has taken place against a backdrop of alarm about decay in the northeastern states and in midwest industrial heartlands. Indeed, the most recent estimates of population change reveal tremendous differences in growth rates, with the states of the Texas-to-Oregon corridor leading the nation.

Table 1

Population by Race and Hispanic Origin, 1976

	Total	White	Black	Hispanic
Arizona	2,274	2,095	58	349
California	20,996	18,479	1,648	3,348
Colorado	2,537	2,427	89	278
Idaho	828	814	-	27
Montana	747	721	3	6
Nevada	601	545	38	35
New Mexico	1,155	1,017	20	420
Oklahoma	2,681	2,408	179	38
Oregon	2,292	2,209	30	40
Texas	12,307	10,799	1,428	2,557
Utah	1,221	1,199	8	41
Washington	3,503	3,338	67	74
Wyoming	376	364	3	16
Total (Western States)	51,525	46,419	3,578	7,233
Total (All States)	211,517	183,637	24,297	11,195

Source: Current Population Survey, Series P-20, Number 334, January, 1979, Table 1.

Table 2 shows that the West, as a region (Census definition), grew 15.1 percent from 1970 to 1978, almost twice as fast as the rest of the country. Six of the thirteen western and southwestern states grew more than twenty percent in that period. Texas and California have attracted the most national attention as booming population centers, and the absolute numbers confirm that these two states did account for 58 percent of the total growth in the region during the period.

While rural areas throughout the nation have shown significant increases in net migration rates, Table 3 shows that for rural areas of the West, these rates were nearly three times as great during the period 1970-1974 as they were from 1960 to 1970. A Rand study of population shifts between metropolitan and non-metropolitan counties in broad economic areas reveals that the western states have led the nation in migration into rural areas since 1970.[3] In most states, this represents a reversal of 1960's trends.

The same Rand study identifies four general reasons for these population shifts:

1. Transportation has become easier, less expensive, and more accessible. (This factor may be somewhat less important with fuel cost increases.)
2. Industrial trends have changed in two important ways:
   a) Lower cost of land and wages in non-metropolitan areas have combined with transportation advances to make decentralization more attractive.
   b) There has been a "revival or expansion of energy extraction and highly localized, large-scale energy related industrial development, often in remote locations."

Table 2

Change in Population, Regions and Selected States
1970-78

		Percent	Number (thousands)
United States Total		7.3	14,757
Regions:	Northeast	-	21
	North Central	2.9	1,661
	South	12.4	7,814
	West	15.1	5,262
Selected Western States:			
	Arizona	32.6	578
	California	11.6	2,323
	Colorado	20.9	461
	Idaho	23.1	165
	Montana	13.0	90
	Nevada	35.0	171
	New Mexico	19.2	195
	Oklahoma*	12.5	321
	Oregon	16.8	352
	Texas*	16.2	1,815
	Utah	23.4	248
	Washington	10.6	360
	Wyoming	27.4	91

*Not included in Census definition of West, cited above.

Source: Current Population Survey, Series P-20, Number 336; April, 1979, Table 22.

Table 3

Percentage-Point Change in Average Annual Net Migration Rates Between 1960-1970 and 1970-1974, by Type of Nonmetropolitan County and Region

Type of County	Northeast	North Central	South	West
All Nonmetropolitan[a]	0.94	1.26	1.52	2.05
Urbanized	0.71	0.04	0.60	1.26
Adjacent	0.57	-0.05	0.85	0.98
Nonadjacent	1.21	0.16	0.41	1.48
Less Urbanized	0.95	1.10	1.54	1.60
Adjacent	0.75	0.90	1.57	1.35
Nonadjacent	1.18	1.24	1.50	1.66
Rural	1.55	1.87	1.80	2.81
Adjacent	1.33	1.69	1.96	2.87
Nonadjacent	1.65	1.92	1.69	2.80

Population data are unweighted estimates based on 1970 Census and Current Population Reports. County classifications supplied by Economic Research Service, USDA.

[a]Counties designated nonmetropolitan as of 1970 are categorized according to the scale of urban influence (see text, pp. 21-22). Urbanized = 20,000+ urban residents; less urbanized = 2,500 to 19,999; rural = less than 2,500--i.e., entirely rural. (Residents are classified as "urban" if they live in an incorporated or unincorporated place or township of 2,500 or more inhabitants.) Adjacent counties are those that share a common boundary with a metropolitan county.

Source: Kevin F. McCarthy and Peter J. Morrison, The Changing Structure of Nonmetropolitan Areas in the United States, Rand Corporation, Report No. R-2399-EDA, January, 1979, p. 29.

3. Life styles have changed:

   a) Early retirement and preferences of younger people have created a larger population seeking a more relaxed, less expensive life away from urban problems.

   b) Better retirement incomes have resulted in a demand for more services (and created more service jobs) in retirement areas.

   c) Increased emphasis on leisure has made rural areas attractive as recreation centers.

4. Government growth patterns have affected rural areas. Population growth has occurred around smaller state capitals, towns with institutions of higher education, military installations and places which are centers for other types of government activity.[4]

All of these reasons for rural growth are particularly important for the western states. The breathtaking scenery of the Rocky Mountains and the Pacific Coast have drawn thousands for recreational purposes, and thousands more who wish to live in places with the psychic rewards of natural beauty. Climate, as well as scenery and relaxed cultural patterns, have attracted retirees to western states. Government and education are growing in the West as elsewhere, and of increasing importance are energy related mining and industrial development.

The impact of these growth trends upon the small towns and thinly populated rural areas of the West is potentially very great. The addition of a few people in absolute numbers to these sparsely populated areas has greater significance in terms of the ability of the social structure to deal with the changes.

Economic Activity in the West

The western states, particularly the mountain states, have significantly higher percentages of their populations occupied in agriculture, mining, construction and trade than the U. S. as a whole (Table 4). The coastal areas of the Pacific states are much more populous and are economically much more like the rest of the nation. Inclusion of data on this area brings percentages for the region closer into line with national figures. Even so, the region shows much lower concentrations of employment in manufacturing, and higher employment in every type of service industry. The Conference Board study compares the West and the "New South," which have similar metropolitan/non-metropolitan population distributions, and notes that the West has a "greater reliance on natural resources...less manufacturing in the West's small towns, and more of its metropolitan industry is oriented toward either processing raw materials... or supplying what is necessary to exploit its natural resources."[5]

Agriculture in the West is, first of all, heavily dependent upon the availability of water. Dry country can support only a few head of livestock per acre, for example, so ranches must be very large to be economically viable. Irrigation is responsible for the fertility of many parts of the region, including the great plains of West Texas and the lush valleys of California and Arizona, and accounts for the major part of the cash value of crops. However, large-scale irrigation is expensive. Lack of water, and the expense of irrigation, have contributed to the concentration of land holdings. Average land acreage per farm exceeds the national average in all of the thirteen states of the West. In five states, the average farm consists of more than 2,000 acres, compared to a national average of 400 acres.[6] The large agricultural operations of

Table 4

Percent Distribution by Industry of Employed Persons
1976

Industry	U.S.	West		
		All Western States	Mountain[1]	Pacific[2]
Agriculture, Forestry and Fisheries	4.1	4.5	5.5	4.2
Mining	0.8	0.9	2.3	0.5
Construction	5.9	6.0	7.3	5.5
Manufacturing: Durable	13.1	10.4	7.1	11.6
Non-Durable	9.3	5.9	4.4	6.5
Transportation, Communication and Public Utilities	6.3	6.4	6.5	6.4
Wholesale and Retail Trade	20.8	21.0	22.6	20.4
Finance, Insurance and Real Estate	5.6	6.8	6.3	7.0
Services, Except Professional	9.1	11.5	11.4	11.5
Professional and Related Services	19.6	20.1	19.2	20.4
Public Administration	5.6	6.4	7.3	6.1

[1]Mountain states include: Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada

[2]Pacific states include: Washington, Oregon, California, Alaska, Hawaii

Source: Current Population Reports, Series P-20, Number 334, January, 1979, Table 32

the West are also highly capitalized, making it difficult to enter the sector or to maintain family enterprises.

The Rocky Mountain states have extensive stores of oil shale, uranium, gas, and above all, coal. The depletion of the world's oil fields and political hazards of national dependence of foreign energy sources make it inevitable that these resources will be exploited at increasingly rapid rates--and this exploitation will have a disproportionate effect on the rural areas in which most natural resource deposits are located. It will also have a disproportionate effect on Indian tribes, under whose land lies an estimated half of the nation's uranium reserves, 16 percent of the coal, and four percent of the oil and natural gas.[7]

The Effects of Economic Growth

The economic forces at work in the nation seem to be bringing rural areas the growth in population and economic activity which could help solve some of the problems. National trends, however, will not solve the problems of specific places and people. The nation's experience is that growth and change do not come uniformly, but leave many places with the same problems and poverty, even when there is prosperity in the nation or region as a whole. Economic growth and change may not be the right kind--and they may come too fast as well as too slowly. Instead of solving problems and increasing options, these forces can result in a loss of valuable traditions and a gain of only a new set of problems.

The changes occurring in the western states are posing problems for rural communities, even while they offer solutions. The economic growth which has brought jobs and higher incomes has come much too quickly to some mining communities of Montana, for example, and has entirely missed many other isolated rural areas. Vast stretches of the West simply do not

have enough water to support more people, much less industrial or agricultural development using currently available technologies.

Table 5 shows the relative strength of growth in western employment opportunities. The table also reveals that the distribution of these opportunities heavily favors trade and service industries. Wholesale and Retail Trade, Finance, Insurance and Real Estate, and Services are growing at greater than 35 percent. These industries include many highly paid professional occupations, but they also include many extremely low paid, low skill jobs. Hotel and restaurant workers, health occupations below the professional level, store clerks, domestic and commercial cleaners, and other workers whose services are increasingly demanded by the expanding tourism industry and the growth of retirement centers, are notably poorly paid and provide few opportunities for advancement. There have been efforts to upgrade and to structure career ladders in these occupations, but to date these efforts have made only limited progress. Meanwhile, these occupations are providing inadequate incomes and underemploying many people who have few other options.

The industrial mix of manufacturing growth in the West is also uneven. Table 5 shows that non-durable manufacturing is growing more than twice as fast as durable. Juan de Torres attributes the continuation of industrial growth in the West to "footloose" industries, which can locate away from natural resources, wherever there is a suitable labor force.[8] These industries are labor-intensive, and can be relocated relatively easily. Many have been attracted to western cities, but some have also moved to the rural areas.

The states along the Mexican border have attracted the relatively low-wage, low-skill industries which have also been moving into the South-

Table 5

Employment Percentage Change by Industry Between 1967 and 1975

Industry	U.S.%	Northeast%	North Central%	South%	West%
Manufacturing	-6.3 2/	-13.9	-8.6	7.6	2.9 2/
Durable	-4.7 2/	-16.0	-9.8	9.9	6.8 2/
Non-Durable	-1.5 2/	-21.5	-6.1	5.8	16.0 2/
Transportation and Public Utilities	6.1	- 4.4	2.4	16.8	11.6
Construction	7.3	-11.9	-2.4	21.4	19.8
Mining	17.0	- 3.0	6.4	22.1	31.2
Wholesale and Retail Trade	25.1	12.4	20.6	35.5	35.4
Finance, Insurance and Real Estate	30.9	17.1	23.8	48.0	43.4
Services	40.0	25.7	36.9	51.2	50.1

1/Amdur, Friedman, and Staiger, Investment and Employment Tax Credits: An Assessment of Geographically Sensitive Alternatives, as adapted from Employment and Earnings.

2/1974 data was used because 1975 data was not available.

Source: Paul V. Braden and Krishan K. Paul, The Role of Vocational Education in the Nation's Economic Development, (Columbus, Ohio: National Center for Research in Vocational Education, 1979) p.43.

eastern states. Just as they move to the Southeast to benefit from the labor of rural southerners who have few other options, they move to the Southwest where Mexican and Mexican-American labor is available for low wages.

By contrast, the desert states of the Southwest are also attracting highly sophisticated industries which use nuclear power or require many acres away from population centers for their facilities. These industries often create almost no new jobs for local people. The skills they demand are sophisticated and specialized. Unless there has been intensive cooperation with local schools and training agencies prior to the opening of the facility, nearly the entire workforce is likely to be imported. An official in New Mexico noted that even though the state is experiencing high rates of population growth due to migration, local people are still leaving. The jobs opening up are high level and advertised nation-wide. Competition for these jobs is very keen because of the cultural, climatic and aesthetic appeal of New Mexico.

The northwestern states are the center of growth in energy extraction and related industrial development, though this is affecting the whole western region. Opportunities for employment are opening in mining, and in the new technology operations such as those necessary for converting shale into oil, or geothermal reactions into electricity. However, while these industries offer high wages and require highly skilled employees, they are not labor intensive, so the number of new jobs created is small. In addition, very few minorities or women are involved in the energy-related industries.

Extractive industries are also notoriously unstable. The deserted old boom towns of the West testify to the temporary nature of employment

provided by a vein of gold, silver or other ore: the mine plays out, the town dies, and only an ugly scar remains. Rising prices reopen some mines temporarily, but eventually even expensive recovery methods yield no ore. A study of the Northern Great Plains coal region notes that during the period 1970-74 employment in the region grew two and a half times faster than in the nation as a whole, due to a surge in mining and contract construction. Further, "population growth has been erratic because of the erratic pattern of employment in mining and contract construction. Many parts of the region have grown in one decade, only to decline in the following decade when mining or construction employment declined."[9] Bitter experience with ill-conceived technologies is also part of the history of the West. For example, the use of poor dry land farming techniques brought temporary prosperity to some areas. But the inevitable droughts resulted in permanent loss of the precious, thin layer of topsoil, without which nothing grows. Overgrazing (which in many parts of the West means no more than one animal for each several acres of land) had similar disastrous, permanent effects in many western areas. Current discussions of the use of water-intensive coal mining and transportation methods are conducted against this background.

Decentralization of industry to smaller communities is occurring in the West, but industrialization has costs for the community as well as advantages. These costs may include ecological damage, fewer jobs actually available to local persons than anticipated, at low wages, and with little commitment to remain over the long term. The appeal of short-term economic returns at any long-term risk is very great. People whose commitment is to the community must plan for the kind of development which is needed if these and other problems are to be avoided.

Growth and the Options Facing Youth

Even though the statistics indicate growth in non-metropolitan areas of the West, the patterns of that growth have not yet changed reality for the young person living in a typical rural western community. Reality for most is still that to get the good jobs--or any job--migration to a larger population center is necessary. And migration is also necessary to get the training which could translate into a career future in the home community.

A 1977 study of high school students in Nevada produced the observation that approximately 48 percent of all the rural youth of Nevada anticipate leaving their community after graduation.[10] In high schools enrolling less than 100 students, 84 percent of the girls, and 37 percent of the boys, do not expect to be able to find work in their home community after they graduate. The larger rural schools reported a smaller percentage of girls who expected to have to migrate to find employment (54 percent in rural schools over 450 enrollment) but the percentage of boys with this expectation remained about the same (41 percent). In New Mexico, a state with a similar population distribution as Nevada, this reality is recognized in state policy: an objective set forth in the 1978-79 vocational education state plan was "to increase student awareness of the possible necessity for them to move from the rural areas of the state to find employment."[11]

The dilemma of rural communities which lose their young people because there are no jobs is a familiar one. They suffer from a decline in productive capacity and leadership, especially since the brightest, most promising young people are the most likely to leave. At the same time, in the urban communities to which they go, these young people find

themselves poorly prepared, unable to compete for the most skilled jobs, and often consigned to jobs which offer no future and barely adequate incomes. They may have come to the city with a high school diploma, but they have come with few skills, since a variety of vocational training options is still a rarity in the small high school or within commuting distance of many rural communities.

A special study of rural youth in five states of the Southwest, based on the 1970 census, reported that 14.1 percent of all persons under age 25 in those states (or 2.4 million persons) lived in rural areas.[12] Table 6 shows that these young people included large groups, both of American Indians and persons of Spanish heritage. These young people have special problems, including language difficulties, lack of role models, and high poverty rates among their families, as well as significant cultural differences, which have an impact on their needs.

To illustrate one of the problems, lack of role models, the Bureau of the Census reports that persons of Hispanic origin, who make up 9.8 percent of the total employed in the West, are disproportionally employed in such occupations as laborers (18.1 percent), farmworkers (24 percent), operatives (19.7 percent), and service workers (13.7 percent), while they are underrepresented in the ranks of professionals (3.8 percent) and managers (3.7 percent).[13] A more specific illustration is the make-up of the growing energy related industrial sector, which is overwhelmingly dominated by white males. One estimate placed minority employment in the coal industry, for example, at only 4 percent.[13]

A 1973 study, Mexican American Youth and Vocational Education, noted that while Mexican Americans are a majority of the population in many areas of Texas, they do not hold proportionate shares of the professional

Table 6

State	Total	White	Native American	Black	Spanish Heritage
Arizona	100.00	70.14	27.85	1.59	20.90
California	100.00	94.89	1.36	2.21	18.57
Colorado	100.00	98.60	n.a.	0.30	14.66
New Mexico	100.00	76.63	22.90	0.29	51.78
Texas	100.00	87.82	0.10	11.96	20.42
Total	100.00	89.19	4.15*	5.93	21.49

*Does not include Colorado, because the data are not available.

Source: Luis A. Jimenez and W. Kennedy Upham, Rural Youth in Five Southwestern States: The Population under 25 in Arizona, California, Colorado, New Mexico and Texas, (Prairie View, Texas: Prairie View A & M University, College of Agriculture, May, 1974), 10.

and white collar jobs.[15] Further, the study documented the fact that vocational education has been viewed by Mexican Americans as a means of perpetuating this imbalance by tracking their youth into vocational curricula and away from the college educations that are perceived to be the best means to higher incomes and full integration into the American society.

The language barrier is the most prominent of the culturally based problems of Mexican Americans and American Indians. In the Southwest, the large numbers of Spanish speaking persons have resulted in some governmental efforts to provide bilingual instruction and instructional materials. However, feeling is strong that too much emphasis on the Spanish language can be a disservice to the learner, who must usually face a labor market which demands command of English. Truly bilingual instruction, where difficult concepts can be explained in Spanish, than absorbed in English, offers a solution. In many of the schools of rural New Mexico, Spanish-speaking students make up nearly 100 percent of all students; most teachers do speak Spanish, according to New Mexico officials. Adequate reinforcement of English usage may be a greater problem here than access to instruction in Spanish.

Another aspect of the problem is that students who are verbally bilingual often have never learned to write Spanish. So the translation process which they use to speak English (thought is in Spanish) has no equivalent for reading. Reading English (and job related instructional materials) is thus a much more difficult learning problem.

For Navajos or other American Indian populations, the language problem is even more difficult. Many of the hundreds of Indian dialects have been written down only in the last couple of decades. There are not

many who read them, no cultural tradition of reading, and few instructional materials in the languages. Teachers with verbal knowledge of Indian tongues are rare.

Work habits are also affected by cultural orientation. Many rural residents of every ethnic group have an agricultural orientation which includes hard work, but also allows for flexibility in work scheduling according to individual priorities.[16] An autumn hunting season vacation is a concession a number of rural firms have made to standing community patterns. As another example of such a cultural orientation, the traditional Navajo reverence for the extended family mitigates against the work patterns of industrial society. If a member of the family is sick, for example, all the other family members may be expected to accompany the patient to the doctor. In another instance, an individual may take off work to attend the funeral of several "grandmothers"--many of whom are adopted, according to custom, and due the same reverence as biological grandmothers are accorded in the general society. An employer, however, may find it difficult to support or understand such practices.

The challenge of the vocational system is to respect the culture and build upon its traditions, while at the same time equipping the student with skills and with knowledge of the required working patterns. The student must have enough knowledge of the conditions to be faced in the labor market to devise for himself or herself ways to preserve valuable cultural traditions and at the same time earn a living.

Some of the adjustment, however, should fall to the design of appropriate vocational curricula. Training which would equip individuals to remain in their community and contribute to its economic development, is the basic challenge.

The unique artistry and commitment to quality which is a part of the cultural heritage of many groups also provides an opportunity for commercial success. The Navajos, for example, have built profitable enterprises from their traditional national crafts. Traditional economic pursuits have also become the foundation for modern commercial enterprises which support the continuation of communities. The Lummi Indians of the Pacific coast have modernized their fishing occupations into successful ventures through the community development corporation (CDC) concept. (This idea, developed in the 1960's, provides a model for economic development controlled and directed by the developing community.)

Such community-based approaches to development would provide an alternative focus for vocational education and the means for greater accommodation of unique cultural patterns with work patterns.

Growth Patterns and Vocational Education Strategies

Vocational education in the rural areas of western states faces tremendous problems. Many state administrators admit that vocational education in the small high school is practically non-existent. These schools may offer homemaking and agriculture, but they cannot form classes of sufficient size to qualify for the equipment or teachers which make a variety of offerings possible. For example, in Idaho, 54 of 106 districts offer three or fewer vocational programs. In 29 of the districts, agriculture and homemaking are two of the three programs offered; in all except three districts, homemaking is one of the offerings.[17] In Texas, where districts with less than 5,000 students enrolled make up 91 percent of all districts, and enroll 33.5 percent of all students, agriculture and homemaking education again dominate the vocational offerings. While 97 percent of these districts offer homemaking education, and 85 percent

offer agriculture, only 36 percent offer industrial education, 25 percent offer office occupations, and 34 percent offer distributive education. The smaller the district, the fewer choices are available: only three districts with enrollments less than 500 offer office occupations, and only two districts of this size offer distributive education.[18]

The absence of vocational education opportunities in rural areas is, first of all, a failure to meet the needs of individuals. Preparation for earning a living, in a way which suits the individual's capabilities and general preferences, is vital to the fulfillment of the person. Training for earning a living is also the means by which a society meets its needs for a labor force able to perform the many tasks required to support community life. The dilemma for rural communities is rooted in the lack of employment opportunities, particularly employment opportunities which are financially rewarding, provide careers which employ people at their full productive capacity, and which contribute to the well being of the community.

The small community's evident labor force demand may include only a few highly trained practitioners in each of a variety of occupations, yet the availability of the services of these individuals may be vital to the quality of community life. Locally provided institutional training for such persons is impractical. The unit cost of equipment, instruction, and support for training would be prohibitive. The "demand" for trained persons in a number of occupations, therefore, may be critical, but not of a level which can be reflected in a district's planning for vocational classes.

The development of comprehensive vocational education programs in small schools is inhibited by the funding mechanisms used in most states.

At the secondary level, vocational education is funded primarily by states and localities. Federal funds come with a variety of limitations on how they may be used, including percentage set-asides for serving the handicapped and other minorities. In many cases, the amount of federal funds for which a small school could qualify is simply not high enough to warrant the time and expense of making application. Rural areas are further hampered because of the general lack of special services for target groups such as the handicapped, and the expense of singling out this group for special vocational training.

The most common method for determining funding allocations is based on the number of "full time equivalent" (FTE) students to be enrolled in a program. Where this is the case, small schools cannot qualify for expensive vocational programs, and cannot institute a variety of offerings. One western state, Idaho, is considering adoption of a unit cost method of funding which would alleviate this problem. Where the minimum number of students (in this case, ten) could be enrolled, the school would receive state funding based on the cost of the program to be offered, rather than the number of students to be enrolled.

The economic growth patterns which are bringing population into rural areas are providing opportunities to design vocational programs tied to the actual employment prospects of the local area. Timing and cooperation are keys to this approach. Industrial developers know that businesses are reluctant to locate in an area where there is no trained labor force with the skills required. If training institutions select curricula which are not related to reasonable employment prospects, they will only be training their students to relocate out of the area. Programs in which training is tied to the opening of a particular plant, and is closely coordinated

with the needs of that business, has been one approach used to overcome this problem. This approach, however, can produce persons whose skills have limited transferability. Still, coordination of training programs with economic growth prospects is the most logical way for vocational education to meet the needs of both students and society.

In the West, the importance of energy-related development, and its likely concentration in rural areas, provides an opportunity for development of programs which could prepare rural youth for careers they could pursue in their home communities. Some factors mitigating against the realization of this objective have already been outlined: the relatively low labor intensity of such industries, the tendency to import technical and professional personnel, few local or minority role models already in the occupations. To these should be added the difficulties and lack of efforts to implement advance planning for coordination of training with the opening of business.

Linkage of training to predictable growth patterns has other problems. Much rural "development" has been attributable to growth in traditionally low-wage industrial or service occupations. Even when advance planning indicates the future availability of employment in such occupations, building vocational curricula around this demand may not be the best choice for individuals or communities. As Jonathan Sher comments in his book, Education in Rural America:

> "If one subscribes to the belief that half a loaf is better than none, this situation may be quite acceptable. Yet, for those who are concerned about the implications of transforming America's rural population into a "servant class" ...this strategy is plainly unsatisfactory.[19]

In extremely small schools, the problem of assessing local skill "need" in terms of what is already in demand, and basing choice of curricula

on that need, works in favor of agriculture and homemaking as the only two offerings. As one official said, "There are no jobs, so there's no need to train them...if you have no (definable) need, you just don't offer anything." This attitude has in some areas been adopted by state legislatures and even local districts which consider that they are training their children to contribute to the well-being of another local area or state. While this may indeed be the result, it is an attitude which defeats prospects of attracting economic development, and it seriously handicaps the students when they do move.

This "migration orientation" has also been shared by the area vocational center approach. In this model, adopted by several of the more populous states, a school is established to serve a number of nearby high schools and communities. Students are bused to the center, where they may take a number of programs. The offerings of these schools are often geared to the sophisticated technical demands of industries located in the urban centers of the state.

Oklahoma operates area vocational centers at 33 sites in 22 districts, putting a relatively wide range of vocational offerings within practical commuting distance of most students. Some of these schools serve several counties and up to 100 local districts. Only four geographic areas of Oklahoma remain unserved; two of these should be served in the next few years, but there are not now plans to extend service to the two most sparsely populated areas in the western part of the state.

Other cooperative models have resulted from local initiatives. Four communities in a west Texas county provide an alternative model. A 1973 case study showed that the youth of Jones County considered the lack of vocational training to be the major deficiency of their schools. But in

Texas, as in most other states, schools qualify for vocational units when enough students can be found to make a full class (usually 20 students). No one of the four county high schools could quality for vocational units, but the county-wide demand was substantial. In spite of the fear of consolidation, which to many communities means a severe blow to their very existence, leadership of four towns met to develop a means of cooperation. After three years of planning, and a comprehensive needs assessment, the schools were able to form classes in auto mechanics, building trades and office education. Each of the three schools offer one curriculum. Students are bused from each high school to a central exchange point morning and mid-day, and returned after half a day of classes in the school offering the curriculum they desire. The cooperating districts are enthusiastic, and have produced an account of their experiment as a guide for other efforts.[20]

Rural communities in the West, as elsewhere, are concerned that loss of the school signals the end of identity as a community. The area vocational center or other cooperative effort to deliver vocational education is resisted as a step toward consolidation. In New Mexico, for example, the local districts have been able to keep such centers from being planned. An Oklahoma official, however, reports that cooperation with the centers is sold to the districts as an extension of their resources which actually diminishes pressures for consolidation.

The rising cost of gasoline has weakened the appeal of the area vocational center or other model involving busing, especially in the sparsely populated areas where the daily commute is necessarily long. In addition, there is a practical maximum on the length of the commute a student can make. Some New Mexico students are already riding 90 miles one way to

school every day. An additional commute to a vocational center or another school is impractical. Other models, such as use of mobile units or residential centers, have had limited successes, but have not been widely adopted.

A New Concept

Rural communities in the West share all of the difficulties common to rural communities elsewhere. In addition, more of them are isolated, by greater distances, from other population centers, making cooperative efforts more difficult. To an even greater degree than for rural areas in general, their future depends on their own efforts, and their own resources. This implies the necessity of wise, maximum use of those resources, including the talents and abilities of every resident. It also requires local determination of the directions chosen. The record of externally controlled development is too poor in terms of offering real opportunities to rural people, for that course to be considered viable.

The conventional thinking about vocational education concentrates on ways to make physically available to students the traditional approaches to teaching and learning vocational skills. A more creative approach would take into account the need for a broader base of skills which would equip a rural resident for a more varied occupational pattern. Rural communities lack the population for the kind of occupational specialization that is possible in large urban centers. Since underemployment and seasonality of employment are greater problems than unemployment in rural areas, alternate skills are more necessary for an individual to earn an adequate income. As Stuart Rosenfeld put it:

> The high incidence of underemployment in rural areas creates a need for occupational skills other than the principal source of income...Somewhat different policies could allow vocational education systems in rural areas more flexibility to provide [training in skill areas which may] earn only in-kind income yet [are] skills needed for rural survival and secondary skills for increased occupational mobility.[21]

Both rural individuals and rural communities will be better served by an approach to vocational education which combines a focus on the needs of the community for services it lacks and on the needs of the individual for remunerative and satisfying employment. Preservation of the community's character and traditions is an important part of this context. Sher has suggested adapting the community development corporation (CDC) concept, using the rural school as its center.[22] This approach would provide a way to address the lack of employment opportunities. It would provide a focus for rural vocational education, and also offer the promise that economic development of the community would take a direction the people determined for themselves.

Footnotes

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3. Kevin F. McCarthy and Peter J. Morrison, The Changing Demographic and Economic Structure of Nonmetropolitan Areas in the United States, (Santa Monica, California; Rand Corporation, Report No. R-2399-EDA, January, 1979) 32.

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5. Juan De Torres, op. cit., 28.

6. U. S. Department of Agriculture, Agricultural Statistics (Washington, D. C.: USGPO, 1978) Table 602.

7. U. S. Commission on Civil Rights, Energy Resource Development: Implications for Women and Minorities in the Intermountain West (Washington, D. C.: USGPO, November, 1978) 9.

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20. Dr. Bill Walker, Vocational Program Development in a Rural Setting: A Plan of Action (Austin, Texas: Texas Education Agency, June, 1979).

21. Stuart Rosenfeld, op. cit., 22.

22. Jonathan Sher, op. cit.